0138: COMPARING PAIN AND ANALGESIA REQUIREMENTS IN DIFFERENT PROCEDURES FOR THE TREATMENT OF HIP FRACTURES

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Intro: Hemiarthroplasty and proximal femoral fixation are commonly performed procedures, but there is little information regarding post-operative pain experience. Whilst patient comfort is a priority and a requirement for successful rehabilitation, opiate effects are also undesirable especially within this complex, often aged population. A sound strategy of pain management is easier to implement in patients where pain levels can be predicted.

Results: 357 patients were included. 205 underwent a cemented hemiarthroplasty (HA) and 152 had a dynamic hip screw (DHS). No significant difference was found in the length of hospital stay. HA patients recorded a mean morphine requirement of 20.2mg compared with 40.3mg for the DHS group. Interestingly, the early pain score difference was significant ($p=0.009$), after 4 days, the scores were equivalent. This may support the notion of non-surgical factors determining the length of stay.

Conclusion: The reason for the elevated pain scores and higher morphine requirement in the DHS group remains unclear. One theory is the fracture site still exists, and possibly pre-existing hip arthritis may continue to be symptomatic. It is important to recognise the difference in pain experienced between the groups. An understanding of this principle will allow for improved care and a better patient experience.

0156: IMPROVING COMMUNICATION BETWEEN ORTHOPAEDICS AND PRIMARY CARE: A CLOSED LOOP AUDIT CYCLE

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Aims: A discharge summary may be the only notification of admission to trauma ward for a General Practitioner, hence the quality of this document is crucial. This audit cycle aimed to assess and improve the accuracy and content of discharge summaries from our Orthopaedic Department.

Methods: A randomised, prospective audit of 60 orthopaedic discharge summaries was carried out. Content was audited against our Trust's gold standards, over a 7 week period.

After the initial audit, medical staff were given an educational session stressing essential content to be included in discharge summaries. In addition, brief, focused, one-to-one teaching sessions with ward based doctors were held. A re-audit was then conducted.

Results: The initial audit found 90% of discharge summaries had a correct diagnosis and treatment, whilst 91% had accurate medical co-morbidities listed, improving to 100% and 97% respectively post intervention. 72% of summaries had a drug allergy status detailed and 72% had accurate follow up plans documented, increasing to 95% and 100% respectively.

Conclusions: This audit exemplified how group teaching followed by short, non labour intensive, one-to-one sessions had positive effects on the accuracy of discharge summaries, ensuring important information was transferred between orthopaedics and primary pare, thus improving patient safety.

0165: TIP APEX DISTANCE IN DYNAMIC HIP SCREW FIXATION IN PATIENTS WITH AN EXTRACAPSULAR NECK OF FEMUR FRACTURE; AN AUDIT ON CHANGE

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Aim: A recognised complication of dynamic hip screw (DHS) fixation is the screw cutting out from the femoral head. A distance of less than 25mm from the tip of the screw to the apex of the femoral head has been consistently shown to be associated with a reduction in cut-out rates. This audit was undertaken to assess the variability in screw positioning at our district general hospital, recommend improvements, and re-audit the positioning following departmental education.

Method: This retrospective audit was initially undertaken in August to October 2007, then re-audited in January to May 2012, after educating junior surgeons about the tip-apex-distance (TAD) in departmental introductions. The TAD was calculated by the total of the TAD on the anterior-posterior and lateral radiographs.

Results: The initial audit included 10 patients; 6 (60%) had a TAD greater than 25mm. Incorrect TAD was secondary to insufficient fracture reduction (83%), and wrong direction of the screw (17%). The re-audit involved 19 patients; 1 (5.2%) had a TAD greater than 25mm ($p<0.01$).

Conclusions: This audit demonstrates a significant improvement in surgical technique, by raising awareness of local failure rates, and emphasizing the importance of the TAD through continued education and re-auditing of current practices.

0178: ADMISSION BLOOD TESTS SIGNIFICANTLY UNDERESTIMATE ANAEMIA IN HIP FRACTURE PATIENTS – A PROSPECTIVE COHORT STUDY

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Introduction: Mortality after hip fracture remains high. Preoperative anaemia is a risk factor for operative mortality. We hypothesise that admission blood results in hip fracture underestimate anaemia, perhaps due to a dilutional effect during resuscitation.

Methods: We prospectively repeated patients' haemoglobin (Hb), haematocrit (Hct), urea and creatinine tests in the anaesthetic room prior to surgery.

Results: were compared with admission and postoperative values, demographic data and outcomes. 100 patients were included (75 women, 25 men) – 46 extracapsular (EC) and 54 intracapsular (IC) fractures. The mean fall in Hb preoperatively was 11.7 g/L in EC fractures and 7.3 g/L in IC fractures ($p=0.015$), with no significant difference between sexes. The proportionate fall in Hb (8.0%) prior to surgery was matched closely by changes in Hct (6.0%), urea (4.4%) and creatinine (5.2%). On multiple regression analysis the strongest predictor of mortality was a delay between injury and presentation ($p=0.009$) with proportionate preoperative and perioperative changes in Hb also predicting mortality ($p=0.023$ and $p=0.024$, respectively).

Conclusion: We conclude that admission blood tests underestimate anaemia in Hb patients and that this is largely a dilutional effect. Repeating Hb tests prior to surgery may be warranted in high risk patients.

0181: TALES FROM A COMMUNITY HOSPITAL; DOES ENHANCED RECOVERY AFTER SURGERY EXPEDITE PATIENT DISCHARGE FOLLOWING TOTAL KNEE AND TOTAL HIP REPLACEMENTS?

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Aims: This closed loop prospective audit aimed to evaluate the effect of introducing ERAS for patients undergoing elective total hip replacement (THR) and total knee replacement (TKR) on mean length of stay (LOS) in our community hospital.

Method: All patients who underwent primary THR or TKR between January 2012 and May 2012 were compared to all patients, post-introduction of ERAS, between June 2012 and November 2012 receiving the same operations. The effect of ERAS on mean LOS, patients of different genders, and those undergoing TKR vs THR was analysed.

Results: 48 consecutive patients pre-introduction of ERAS (30 female, 18 male, mean age 70 years) were compared to 57 consecutive patients (35 female, 22 male, mean age 71 years) post-introduction of ERAS. The mean LOS reduced from 6.0 to 5.6 days ($p=0.34$). ERAS had a greater effect on LOS in TKRs (6.0-5.4 days, $p=0.29$) than in THRs (6.0-6.0 days), which compares favourably to the Department of Health Report (mean LOS 6.1 days and 6.3 days respectively). Males undergoing TKR had the greatest reduction in mean LOS (6.2 days to 5.4 days, $p=0.53$).

Conclusions: ERAS reduced mean LOS following lower limb arthroplasty, with males undergoing TKRs showing the greatest benefit.

0197: THE IMPACT OF PRE-OPERATIVE ECHOCARDIOGRAMS ON TIME TO SURGERY IN PATIENTS WITH FRACTURED NECK OF FEMUR

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Aims: Determine if pre-operative Echocardiograms in patients admitted with a fractured neck of femur was significantly and unnecessarily delaying time to surgery.

Methods: Data collected retrospectively for 4 month period on patients presenting with a fractured neck of femur, who had a pre-operative

Echocardiogram requested. We recorded time to Echocardiograms and total time to surgery from admission.
Results: Average time to Echocardiograms was 1.7 days. Average time to surgery from Echocardiogram was 1.25 days. 17 patients with no significant Echocardiogram findings had surgery delayed beyond 36 hours. A common reason for Echocardiogram requests was possible auscultation of a cardiac murmur by junior doctors.
Conclusions: The policy to request Echocardiograms was unselective on patients admitted with neck of femur fractures. We suggested reviewing all high-risk patients presenting to Accident and Emergency, with a fractured neck of femur, by a senior member of the medical team. Echocardiograms should be requested for all these patients. An intensive care specialist review the day before surgery, as opposed to the day of surgery was recommended. These measures could help achieve national and local targets, bearing in mind cost and patient safety implications of early operative treatment for patients admitted with a fractured neck of femur.

0220: INITIAL MANAGEMENT OF OPEN FRACTURES IN A&E

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Aim: Does our district general hospital meet the BOA/BAPRAS standards for open fracture management?
Methods: Closed loop audit of patients presenting with open fractures between June 2009 and September 2010 (Cycle 1) and December 2010 and November 2011 (Cycle 2). Departmental teaching was conducted between the cycles. Data collected included antibiotic use, documentation of neurovascular status, wound coverage and limb stabilization.
Results: N = 41 (Cycle 1), N = 49 (Cycle 2). Neurovascular examination was documented in 66% of Cycle 1 compared with 69% of Cycle 2 and dressing use in 56% and 65% respectively. Antibiotics were given in 85% (Cycle 1) and 80%(Cycle 2) of patients and this was intravenous in 46% and 33%.
Conclusions: Little difference was found following the intervention with standards not being met. This may be partially due to a) poor documentation b) large numbers of digital fractures and no agreed guidelines for appropriate antibiotics. This audit highlights the need for a local pathway for open fracture management and a policy for antibiotic use in digital fractures.

0221: A KNEED FOR SATISFACTION – IS AVOIDING THE TOURNIQUET THE ANSWER?

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Aim: To consider the effect of intraoperative tourniquet use on patient satisfaction following total knee replacement (TKR).
Method: Postal questionnaires sent to a cohort of patients (single surgeon series) after TKR assessing their level of satisfaction with the procedure. Chi-squared analysis was used to assess whether the use of a tourniquet led to a greater degree of satisfaction after TKR.
Results: A total of 112 questionnaires were sent out. The response rate was 82.1% (92/112), with 79.3% (73/92) of patients satisfied and a further 11.9% (11/92) unsure. In patients in whom a tourniquet was not used (n=17), there was a greater degree of post-operative satisfaction (15/17) compared to patients in whom a tourniquet was used (n=70); 79% (55/70), but this was not statistically significant, p=0.30.
Conclusions: Avoiding tourniquet is associated with a greater degree of patient satisfaction following TKR. Further studies with increased sample size are needed to investigate this relationship further.

0234: WASTAGE OF INTRAMEDULLARY NAILS IN A DISTRICT HOSPITAL, HOSPITAL/2011

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Aim: Assessing the waste of intramedullary devises in one hospital over one year would highlight if surgeons could improve nail sizing technique. This would therefore decrease waste and cost.
Method: review of theatre book for the period from 01/01/2011 to 31/12/2011.
Results: Over the study period, 77 intramedullary devices used, 35 IMHS, 10 femoral, 22 tibia, 10 of other categories e.g. humours and radius. From the total, 8 (10.3%) nails were not used and wasted. Of these, 1 (12.5%) was IMHS, 2 (25%) were femoral nails, 3 (37.5%) were tibial nails, and 2 (25 %) of other types. In 4 (50%) of the cases, the waste was due to incorrect sizing by the surgeon and in 2(25%) of the cases the management plan changed into plating rather than nailing. One of the wasted nails was opened by theatre staff in error and another one was opened but not used. Over the period under study, the calculated total cost of the waste was £5,559.50.
Conclusion: There is a notable annual incidence of IM nail waste in the study hospital. The majority of the waste was related to surgeon's peri-operative sizing judgement. However, availability of different nail sizes on stock might affected the decision.

0274: POST-OPERATIVE HYPONATRAEMIA AND ELECTIVE ARTHROPLASTY SURGERY: A REVIEW OF THE INCIDENCE, CONTRIBUTING FACTORS, TREATMENT AND OUTCOMES FOLLOWING TOTAL HIP ARTHROPLASTY (THA) AND TOTAL KNEE ARTHROPLASTY (TKA) IN A REGIONAL PRIMARY JOINT UNIT

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Post-operative hyponatraemia (Na<135mmol/L) in the elective arthroplasty setting is a well recognised entity with a multi-factorial aetiology.[1] A retrospective review of prospectively gathered clinical data for 122 patients undergoing THA and TKA between July and October 2012 was performed. Laboratory data was analysed to determine pre and post-operative serum sodium (Na) concentrations. Medical notes were reviewed to determine patient symptoms, regular medications, intravenous fluid prescription, and duration of hospital stay.
Overall, 16.4% of patients developed post-operative hyponatraemia (18.6% of TKAs and 14.3% of THAs). Antihypertensive medications, particularly thiazide diuretics were associated with development of hyponatraemia. Overall mean hospital stay was 3.5 days post-operatively (4.5 days for patients with hyponatraemia and 3.4 days for unaffected patients). In the THA group, mean post-operative hospital stay was increased by 21% in patients with hyponatraemia (4.0 days Vs 3.3 days). In the TKA group, mean post-operative hospital stay was increased by 50% in patients with hyponatraemia (5.1days Vs 3.4 days).
Post-operative hyponatraemia in our elective THA and TKA population remains a relatively frequent occurrence, with considerable impact on duration of hospital stay. Identification of patient sub-groups at risk of developing post-operative hyponatraemia may help reduce its incidence and provide substantial cost and resource savings.

0275: THE INFLUENCE OF PATELLOFEMORAL DEGENERATIVE CHANGES ON THE OUTCOME OF UNICOMPARTMENTAL KNEE REPLACEMENT (UKA)

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Aim: Patellofemoral (PF) joint degeneration is widely considered to be a contraindication to medial compartment UKA. We examined the validity of this preconception
Methods: information gathered prospectively on 147 consecutive patients who underwent the Repicci II® UKA for medial compartment osteoarthritis between July 1999 and September 2000 by the same surgeon. The status of the PF joint was assessed intra-operatively in all patients, and accordingly patients were divided into two groups. Sixty nine had associated PF osteoarthritis (group A) while 78 patients had a normal PF compartment (group B). Variables measured included the International Knee Society (IKS) score, limb alignment, and range of motion. Radiographs, demographic data, length of hospital stay, peri-operative complications. All subsequent surgery, and survivorship at 10 years were recorded. The mean follow-up was 9.4 years (range: 5-10.7 years) and results of the 2 groups compared.
Results: We found no significant differences in terms of IKS scores, alignment, and flexion between the two groups. However, extension was significantly improved post-operatively in those patients with minimal or no PF joint degenerative disease (p<0.05).
Conclusion: Damage to the patellofemoral joint to the extent of full-thickness cartilage loss is not a contraindication to UKA for medial compartment osteoarthritis.